

# USER MANUAL



Please Read Over This Manual Before Operating The Light Fixture

# T ABLE OF CONTENTS

<b>PART 1 PRODUCT (GENERAL).....</b>	<b>1.</b>
1.1--PRODUCT INTRODUCTION.....	1.
1.2--PRODUCT FEATURES.....	1.
1.3--TECHNICAL SPECIFICATIONS.....	2.
1.4--PHOTOMETRIC DATA.....	3.
1.5--SAFETY WARNING.....	4.
 <b>PART 2 INSTALLATION.....</b>	 <b>5.</b>
2.1--MOUNTING.....	5.
2.2--POWER CONNECTION.....	5.
2.3--SETTING UP WITH A DMX512 CONTROLLER.....	6.
2.3-1--DMX512 ADDRESSING WITHOUT ID ADDRESSING.....	6.
2.3-2--DMX512 ADDRESSING WITH ID ADDRESS.....	6.
 <b>PART 3 DISPLAY PANEL OPERATION.....</b>	 <b>8.</b>
3.1--BASIC.....	8.
3.2--MENU.....	9.
3.3--EDIT STATIC COLOUR.....	10.
3.4--ACTIVATING AUTO PROGRAMS.....	10.
3.5--RUN MODE.....	10.
3.6--DMX512 SETTINGS.....	11.
3.7--PERSONALITY.....	11.
3.8--ID ADDRESS.....	11.
3.9--EDITING CUSTOM PROGRAMS .....	12.
3.10--SPECIAL SETTINGS.....	12.
3.11--WHITES SETTING .....	13.
3.12--WHITES BALANCE .....	13.
3.13--ACTIVATE THE PASSWORD .....	13.
 <b>PART 4 USING A DMX512 CONTROLLER.....</b>	 <b>14.</b>
4.1--BASIC ADDRESSING.....	14.
4.2--CHANNEL ASSIGNMENT.....	14.
4.3--BASIC INSTRUCTIONS FOR DMX512 OPERATION.....	19.
 <b>PART 5 APPENDIX.....</b>	 <b>20.</b>
5.1--TROUBLE SHOOTING.....	20.
5.2--MAINTENANCE.....	21.

# 1 PRODUCT (GENERAL)

## 1.1 PRODUCT INTRODUCTION

This product is designed for indoor or outdoor use. Suitable applications include wash or effect lighting for architectural, stage, theatre or road show applications. Direct input of DMX512 signal allows the units to be controlled from any DMX512 controller. This product can be operated as a single unit or in multiple units for large applications.

## 1.2 PRODUCT FEATURES

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### LED FIXTURE

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- \* DIM1~4
- \* DV:NTSC\PAL
- \* RGBW Dimmer 0-100%
- \* Strobe
- \* Built-in automatic programs
- \* Upload custom parameters to slave fixtures
- \* LED display
- \* Display control 'lock-out'
- \* Direct DMX512 input
- \* Independent ID address
- \* Different white colors setting
- \* 'Over-heat' protection

## 1.3 TECHNICAL SPECIFICATIONS

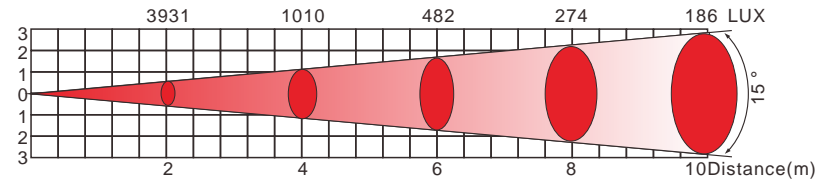
### LED MODULE

<i>LED MODULE:</i>	
<b>Voltage</b>	100~250V...50/60Hz
<b>Rated Power</b>	200W
<b>LED/Unit</b>	54pcs (14 x RED / 14 x GREEN / 14 x BLUE/ 12 x WHITE)
<b>Output/LED</b>	3W
<b>Environment Temperature</b>	-20 ~40
<b>Cooling</b>	fan
<b>Dimensions</b>	270 x 270 x 490mm
<b>Weight</b>	3.2Kg

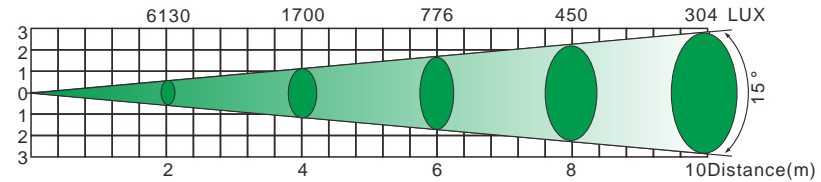
## 1.4 PHOTOMETRIC DATA

### PHOTOMETRIC DATA

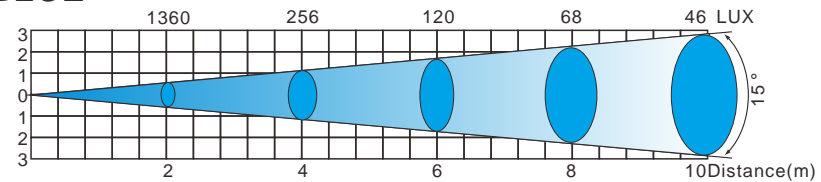
#### **RED**



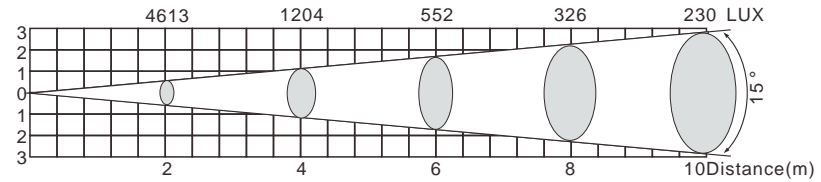
#### **GREEN**



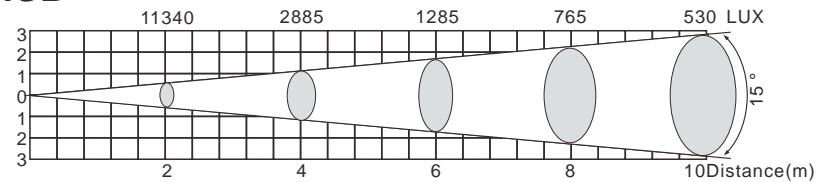
#### **BLUE**



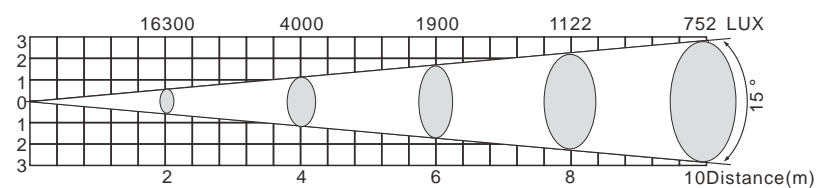
#### **WHITE**



#### **RGB**



#### **RGB+WHITE**



## 1.5 SAFETY WARNING

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### IMPORTANT

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**[ ALWAYS READ THE USER MANUAL BEFORE OPERATION. ]**  
**[ PLEASE CONFIRM THAT THE POWER SUPPLY STATED ON THE PRODUCT IS THE SAME AS THE MAINS POWER SUPPLY IN YOUR AREA. ]**

This product must be installed by a qualified professional.  
Always operate the equipment as described in the user manual.  
A minimum distance of 0.5m must be maintained between the equipment and combustible surface.  
The product must always be placed in a well ventilated area.  
Always make sure that the equipment is installed securely.  
DO NOT stand close to the equipment and stare directly into the LED light source.  
Always disconnect the power supply before attempting and maintenance.  
Always make sure that the supporting structure is solid and can support the combined weight of the products.  
The earth wire must always be connected to the ground.  
Do not touch the power cables if your hands are wet.

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### ATTENTION

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This product left the place of manufacture in perfect condition. In order to maintain this condition and for safe operation, the user must always follow the instructions and safety warnings described in this user manual.  
Avoid shaking or strong impacts to any part of the equipment.  
Make sure that all parts of the equipment are kept clean and free of dust.  
Always make sure that the power connections are connected correct and secure.  
If there is any malfunction of the equipment, contact your distributor immediately.  
When transferring the product, it is advisable to use the original packaging in which the product left the factory.  
Shields, lenses or ultraviolet screens shall be changed if they have become damaged to such an extent that their effectiveness is impaired.  
The lamp (LED) shall be changed if it has become damaged or thermally deformed.

# 2 INSTALLATION

## 2.1 MOUNTING

### HANGING

The fixture can be mounted in a hanging position using the supporting bracket. The bracket should be secured to the mounting truss or structure using a standard mounting clamp. Please note that when hanging the unit a safety cable should also be used.

### UPRIGHT

The fixture can be mounted in an upright or sitting position using the supporting brackets.



The LED MODULE can be mounted at any angle and in any position. It is possible to further adjust the angle of the LED MODULE using the two adjustment knobs located on the side of the fixture.

## 2.2 POWER CONNECTIONS

@ 220V: 15 units may be connected in series

@ 120V: 7 units may be connected in series

**Note:**

1. As this fixture's DMX signal cable connection is Parallel connection, so if over 32 units to be connected, then a DMX signal amplifier is needed.
2. If the signal cable is over 60m between the DMX512 controller and fixture or between two fixtures, then a DMX signal amplifier is needed as well.

## 2.3 SETTING UP WITH A DMX512 CONTROLLER

### 2.3-1 **DMX512 ADDRESSING WITHOUT ID ADDRESSING (STAG MODE)**

Connect the DMX512 controller to the units in series.

Each unit has 11 DMX channels so the DMX Addresses should increase by increments of 11 (e.g. 1,12,23,34...)

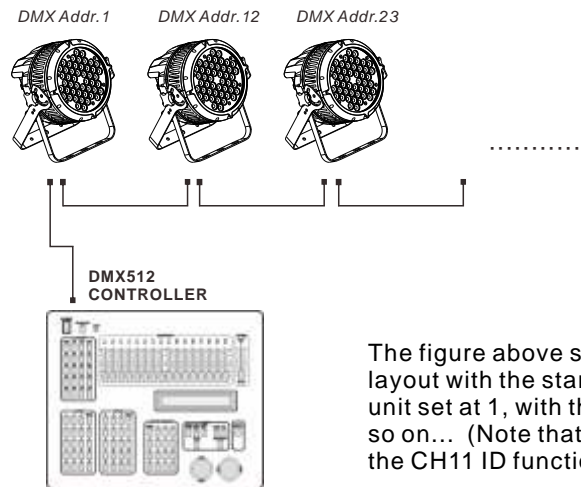
The ID address has not been set so therefore when using the controller CH11 must be inactive (CH11=0).

It is also possible to deactivate ID address selecting **[ID OFF]** from the **[Settings]** menu. on the fixture

Each DMX Address may be used as many times as required.

Any DMX address in the range from 001 to 512 may be used.

#### **Example:**



The figure above shows a simple DMX512 layout with the starting address of the first unit set at 1, with the second set at 12 and so on... (Note that when used in this way, the CH11 ID function must be inactive (CH11=0))

### 2.3-2 **DMX512 ADDRESSING WITH ID ADDRESS (STAG MODE)**

Connect the DMX512 controller to the units in series

Each unit has 11 DMX channels so the DMX Addresses should increase by increments of 11 (e.g. 1,12,23,34...)

Each DMX Address may be used as many times as required.

Any DMX address in the range from 001 to 512 may be used.

Each DMX address may carry up to 66 separate ID addresses.

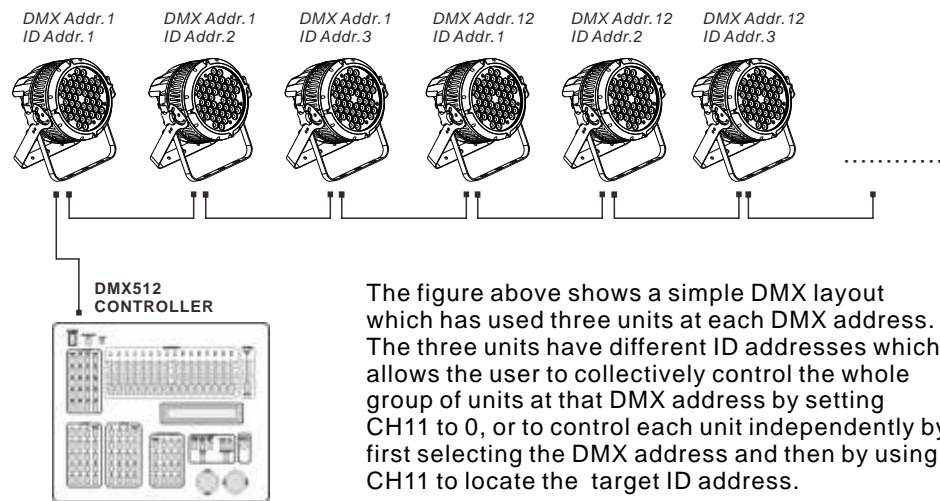
**[ID]** should be set in the menu on each unit in ascending values (i.e. 1,2,3...)

**[ID On]** should be set in the **[Settings]** menu on each unit.

ID addresses are accessible from Ch9 on the DMX512 controller.



### ***Example:***

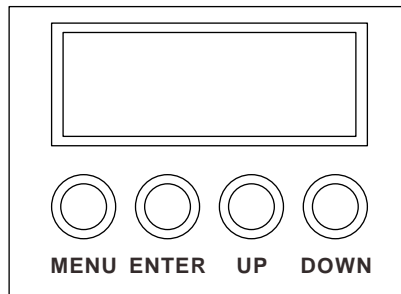


The figure above shows a simple DMX layout which has used three units at each DMX address. The three units have different ID addresses which allows the user to collectively control the whole group of units at that DMX address by setting CH11 to 0, or to control each unit independently by first selecting the DMX address and then by using CH11 to locate the target ID address.

# 3 DISPLAY PANEL OPERATION

## 3.1 BASIC

The LED fixture is mounted with a LCD display and 4 control buttons.



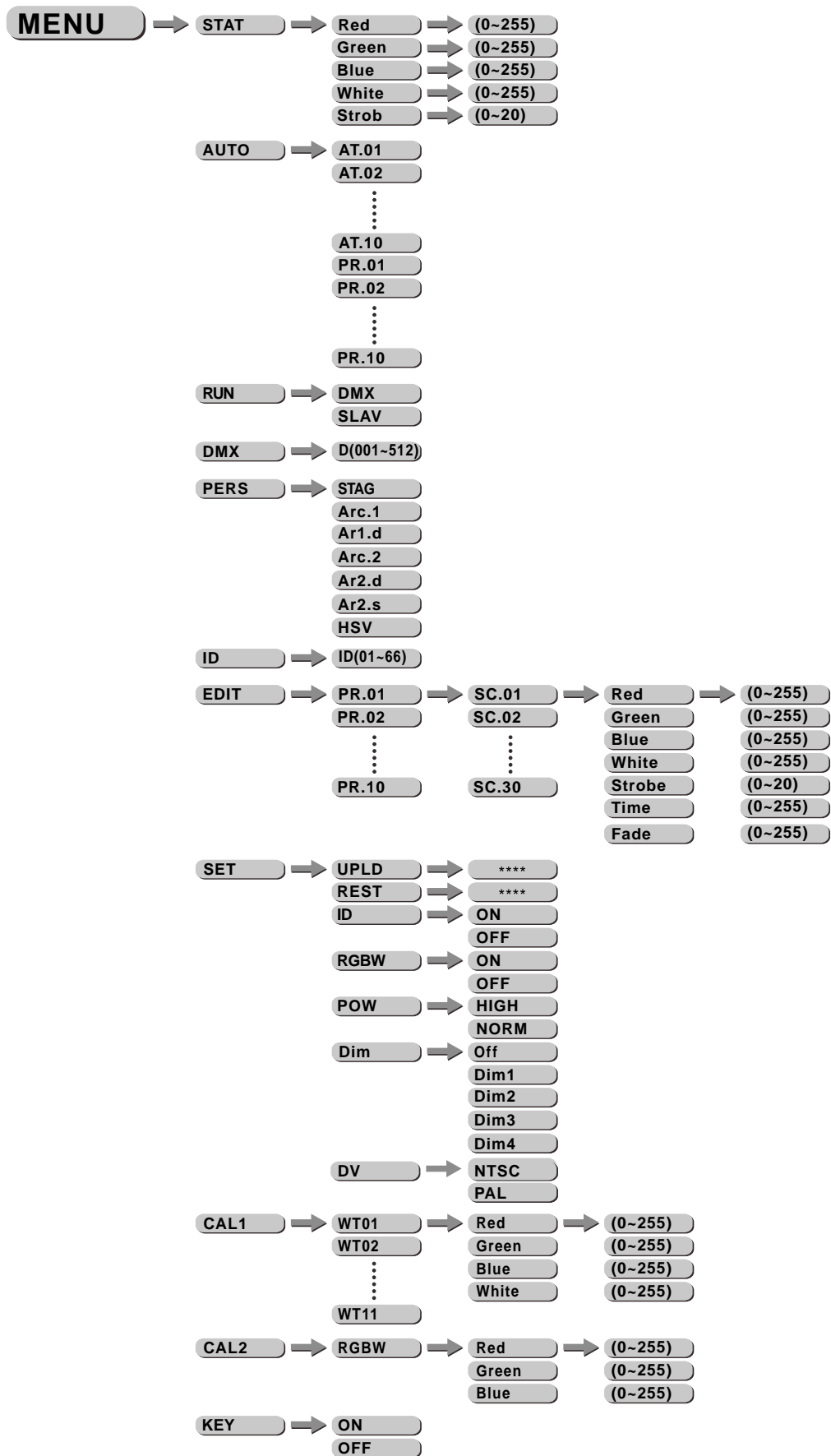
**【 MENU 】** scroll through the main menu or return to the main menu

**【ENTER】** enter the currently selected menu or confirm the current function value

**【 UP 】** scroll 'UP' through the menu list or increase the value of the current function

**【 DOWN 】** scroll 'DOWN' through the menu list or decrease the value of the current function

## 3.2 MENU



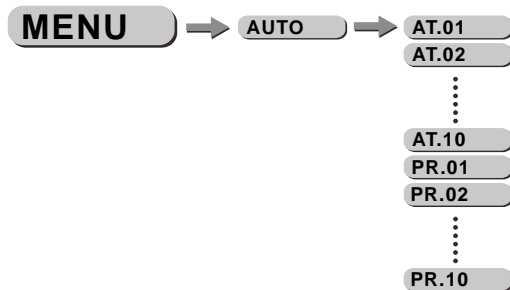
### 3.3 EDIT STATIC COLOUR



#### **【STATIC COLOUR】**

Combine **【Red】**, **【Green】**, **【Blue】** and **【White】** to create an infinite range of colors (0-255)  
Set the value of the **【Strobe】** (0-20Hz)

### 3.4 ACTIVATING AUTO PROGRAMS



#### **【AUTO】**

Select the target **【AUTO】** program and press **【ENTER】**.  
Programs **【AT.01】** to **【AT.10】** are fully pre-programmed and will not be altered by changes in **【EDIT】** mode.  
Programs **【PR.01】** to **【PR.10】** are fully pre-programmed and can be edited in **【EDIT】** mode.

### 3.5 RUN MODE



#### **【RUN】**

Enter the **【RUN】** mode to set working mode.  
**【DMX】** mode is for using the DMX512 controller to control the fixtures.  
**【SLAV】** mode is for Master -- Slave operation.

## 3.6 DMX512 SETTINGS

**MENU** → **DMX** → **D(001~512)**

**【DMX】**

Enter the **【DMX】** mode to set the DMX ADDRESS.

## 3.7 PERSONALITY

**MENU** → **PERS** → **STAG**  
**Arc.1**  
**Ar1.d**  
**Arc.2**  
**Ar2.d**  
**Ar2.s**  
**HSV**

**【PERSONALITY】**

Enter the **【PERSONALITY】** mode to select DMX mode: **【STAG】**, **【Arc.1】**, **【Ar1.d】**, **【Arc.2】**, **【Ar2.d】**, **【Ar2.s】** or **【HSV】**.

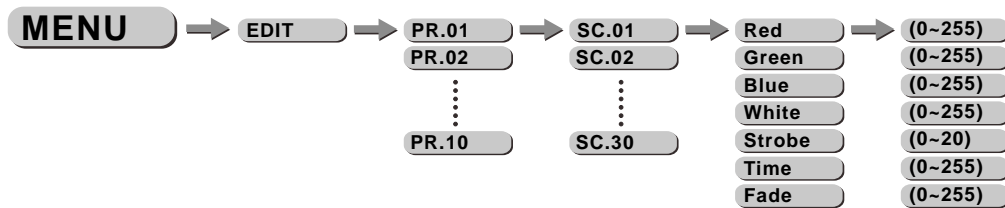
## 3.8 ID ADDRESS

**MENU** → **ID** → **ID(01~66)**

**【ID】**

Enter the **【ID】** mode to set the ID ADDRESS.

## 3.9 EDITING CUSTOM PROGRAMS



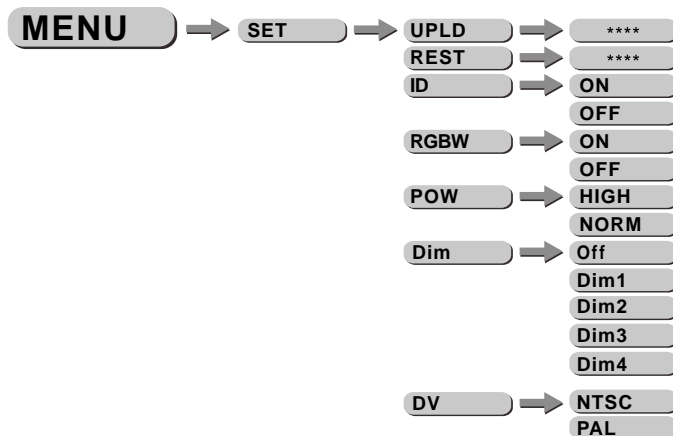
### 【EDIT CUSTOM】

Enter the **【EDIT】** mode to edit the custom programs **【PR.01】** to **【PR.10】**.

Each custom program has 30 steps that can be edited.

Each step allows the creation of a scene using RED **【Red】**, GREEN **【Green】**, BLUE **【Blue】**, WHITE **【White】**, STROBE **【Strobe】**, TIME **【Time】** & FADE **【Fade】**.

## 3.10 SPECIAL SETTINGS



### 【SETTING】

Select **【UPLD】** to upload the custom programs from the current MASTER unit to the SLAVE units.

In order to activate the upload function the password must be entered.

Password is the same as the main access password.

When uploading the MASTER and SLAVE units will display YELLOW.

If an error occurs when uploading the MASTER and/or SLAVE units will display RED.

On successful uploading of the custom programs the MASTER and SLAVE units will display GREEN.

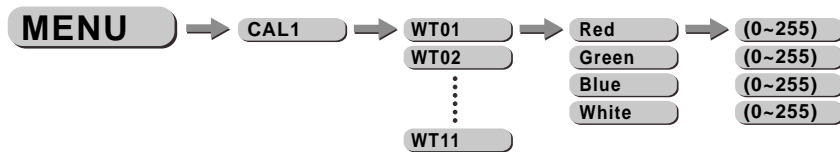
In order to reset custom modes to default values select **【REST】**.

Enter **【ID】** in order to allow/disallow ID address function from the DMX512 controller.

When **【RGBW】** -- RGB TO WHITE is set to **【YES】**, on RGB = 255,255,255, the color is perfect white as the actual RGB values are adjusted to make white. When it is set to **【NO】**, on RGB = 255,255,255, the RGB values are not adjusted and the output is most powerful. The **【RGB W】**'s parameter can be adjusted in **【CAL2】**. Enter **【POW】** to choose the operation power mode **【NORM】** or **【HIGH】**, when it is normal mode, the power consumption is about 90W, while under high mode, it is about 150W.

Enter **【Dim】** to select dimmer mode and dimmer speed. When DIMMER is set to **【Off】**, then RGBW and MASTER DIMMER are linear. The Dim 1/2/3/4 are speed modes of the non linear dimmer, **【Dim1】** is the faster, while **【Dim4】** is the slowest. The **【Dim】** setting here does not react on the the **【STAG】** mode.

### 3.11 WHITES SETTING



#### 【CAL1】

Enter the **【CAL1】** to select white color of different color temperature. There are 11 pre-programmed White colors can be edited by using **【Red】**, **【Green】**, **【Blue】** & **【White】**.

### 3.12 WHITE BALANCE



#### 【CAL2】

Enter the **【CAL2】** to adjust the RGB parameter to make different whites. When the new setting is activated, the DMX controller choose RGB = 255,255,255, the white color will be made by the actual RGB values on the **【CAL2】**.

### 3.13 ACTIVATE THE PASSWORD



#### 【KEYLOCK】

Enter the **【KEY】** mode to select whether the access password is on or off. In order to enter access password it is necessary to first press **【ENTER】**. Access password is **【UP】** + **【DOWN】** + **【UP】** + **【DOWN】**.

# 4 USING A DMX512 CONTROLLER

## 4.1 BASIC ADDRESSING

Connect all of the units in series using standard DMX512 signal cable or the IP65 rated cable provided.

Set the DMX512 address in the **【DMX】** menu.

It is possible to have the same DMX address or independent addresses for each fixture.

## 4.2 CHANNEL ASSIGNMENT

Note: This product have three DMX512 channel configuration: **【STAG】**, **【Arc.1】**, **【Ar1.d】**, **【Arc.2】**, **【Ar2.d】**, **【Ar2.s】** and **【HSV】**

### STAG

CHANNEL	VALUE	FUNCTION
1	0 ⇄ 255	MASTER DIMMER
2	0 ⇄ 255	RED (or STEP TIME when CUS.01-CUS.10 in CH8 is activated)
3	0 ⇄ 255	GREEN (or FADE TIME when CUS.01-CUS.10 in CH8 is activated)
4	0 ⇄ 255	BLUE
5	0 ⇄ 255	WHITE
6	0 ⇄ 9	COLOR MACRO NO FUNCTION
	10 ⇄ 29	RED 100% /GREEN UP/BLUE 0%
	30 ⇄ 49	RED DOWN/GREEN 100% /BLUE 0%FUNCTION
	50 ⇄ 69	RED 0% /GREEN 100% /BLUE UP
	70 ⇄ 89	RED 0% /GREEN DOWN/BLUE 100%
	90 ⇄ 109	RED UP/GREEN 0% /BLUE 100%
	110 ⇄ 129	RED 100% /GREEN 0% /BLUE DOWN
	130 ⇄ 149	RED 100% /GREEN UP /BLUE UP
	150 ⇄ 169	RED DOWN /GREEN DOWN/BLUE 100%
	170 ⇄ 200	RED 100% /GREEN 100% /BLUE 100% /WHITE 100%
	201 ⇄ 205	WHITE 1(3200K)
	206 ⇄ 210	WHITE 2 (3400K)
	211 ⇄ 215	WHITE 3(4200K)
	216 ⇄ 220	WHITE 4(4900K)
	221 ⇄ 225	WHITE 5(5600K)
	226 ⇄ 230	WHITE 6(5900K)
	231 ⇄ 235	WHITE 7(6500K)
	236 ⇄ 240	WHITE 8(7200K)



CHANNEL	VALUE	FUNCTION
6	241 ⇔ 245	WHITE 9: 8000K
	246 ⇔ 250	WHITE 10: 8500K
	251 ⇔ 255	WHITE 11: 10000K
7		<b>STROBE</b>
	0 ⇔ 9	NO FUNCTION
	10 ⇔ 255	1~20Hz
8		<b>AUTO</b>
	0 ⇔ 40	NO FUNCTION
	41 ⇔ 70	AUTO 1
	71 ⇔ 80	AUTO 2
	81 ⇔ 90	AUTO 3
	91 ⇔ 100	AUTO 4
	101 ⇔ 110	AUTO 5
	111 ⇔ 120	AUTO 6
	121 ⇔ 130	AUTO 7
	131 ⇔ 140	AUTO 8
	141 ⇔ 150	AUTO 9
	151 ⇔ 160	AUTO 10
	161 ⇔ 170	PROG1
	171 ⇔ 180	PROG 2
	181 ⇔ 190	PROG 3
	191 ⇔ 200	PROG 4
	201 ⇔ 210	PROG 5
	211 ⇔ 220	PROG 6
	221 ⇔ 230	PROG 7
	231 ⇔ 240	PROG 8
	241 ⇔ 250	PROG 9
	251 ⇔ 255	PROG10
9	0 ⇔ 255	<b>AUTO SPEED ADJUSTMENT</b> When using CH8,AUTO01-AUTO10, this function activated
10		<b>DIMMER SPEED</b>
	0 ⇔ 50	LINEAR DIMMER
	51 ⇔ 100	NON LINEAR DIMMER 1 ( fastest )
	101 ⇔ 150	NON LINEAR DIMMER 2
	151 ⇔ 200	NON LINEAR DIMMER 3
	201 ⇔ 255	NON LINEAR DIMMER 4 ( slowest )
11	0	<b>ALL ID ADDRESS</b>
	1 ⇔ 255	ID1~ID66

CHANNEL	VALUE	FUNCTION
11	60 ⇔ 69	ID6
	70 ⇔ 79	ID7
	80 ⇔ 89	ID8
	90 ⇔ 99	ID9
	100 ⇔ 109	ID10
	110 ⇔ 119	ID11
	120 ⇔ 129	ID12
	130 ⇔ 139	ID13
	140 ⇔ 149	ID14
	150 ⇔ 159	ID15
	160 ⇔ 169	ID16
	170 ⇔ 179	ID17
	180 ⇔ 189	ID18
	190 ⇔ 199	ID19
	200 ⇔ 209	ID20
	210	ID21
	211	ID22
	⋮	⋮
	254	ID65
	255	ID66

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Arc. 1

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CHANNEL	VALUE	FUNCTION
1	0 ⇔ 255	RED
2	0 ⇔ 255	GREEN
3	0 ⇔ 255	BLUE
4		DIMMER SPEED
	0 ⇔ 50	LINEAR DIMMER
	51 ⇔ 100	NON LINEAR DIMMER 1 ( fastest )
	101 ⇔ 150	NON LINEAR DIMMER 2
	151 ⇔ 200	NON LINEAR DIMMER 3
	201 ⇔ 255	NON LINEAR DIMMER 4 ( slowest )

## Ar1. d

CHANNEL	VALUE	FUNCTION
1	0 ⇄ 255	MASTER DIMMER
2	0 ⇄ 255	RED
3	0 ⇄ 255	GREEN
4	0 ⇄ 255	BLUE
5		DIMMER SPEED
	0 ⇄ 50	LINEAR DIMMER
	51 ⇄ 100	NON LINEAR DIMMER 1 ( fastest )
	101 ⇄ 150	NON LINEAR DIMMER 2
	151 ⇄ 200	NON LINEAR DIMMER 3
	201 ⇄ 255	NON LINEAR DIMMER 4 ( slowest )

## Arc. 2

CHANNEL	VALUE	FUNCTION
1	0 ⇄ 255	RED
2	0 ⇄ 255	GREEN
3	0 ⇄ 255	BLUE
4	0 ⇄ 255	WHITE
5		DIMMER SPEED
	0 ⇄ 50	LINEAR DIMMER
	51 ⇄ 100	NON LINEAR DIMMER 1 ( fastest )
	101 ⇄ 150	NON LINEAR DIMMER 2
	151 ⇄ 200	NON LINEAR DIMMER 3
	201 ⇄ 255	NON LINEAR DIMMER 4 ( slowest )

## Ar2. d

CHANNEL	VALUE	FUNCTION
1	0 ⇄ 255	MASTER DIMMER
2	0 ⇄ 255	RED
3	0 ⇄ 255	GREEN
4	0 ⇄ 255	BLUE
5	0 ⇄ 255	WHITE

6		<b>DIMMER SPEED</b>
	0 ⇄ 50	LINEAR DIMMER
	51 ⇄ 100	NON LINEAR DIMMER 1 ( fastest )
	101 ⇄ 150	NON LINEAR DIMMER 2
	151 ⇄ 200	NON LINEAR DIMMER 3
	201 ⇄ 255	NON LINEAR DIMMER 4 ( slowest )

Ar2. s

CHANNEL	VALUE	FUNCTION
1	0 ⇄ 255	<b>MASTER DIMMER</b>
2	0 ⇄ 255	<b>RED</b>
3	0 ⇄ 255	<b>GREEN</b>
4	0 ⇄ 255	<b>BLUE</b>
5	0 ⇄ 255	<b>WHITE</b>
6	0 ⇄ 9	<b>COLOR MACRO</b> NO FUNCTION
	10 ⇄ 29	RED 100% /GREEN UP/BLUE 0%
	30 ⇄ 49	RED DOWN/GREEN 100% /BLUE 0%FUNCTION
	50 ⇄ 69	RED 0% /GREEN 100% /BLUE UP
	70 ⇄ 89	RED 0% /GREEN DOWN/BLUE 100%
	90 ⇄ 109	RED UP/GREEN 0% /BLUE 100%
	110 ⇄ 129	RED 100% /GREEN 0% /BLUE DOWN
	130 ⇄ 149	RED 100% /GREEN UP /BLUE UP
	150 ⇄ 169	RED DOWN /GREEN DOWN /BLUE 100%
	170 ⇄ 200	RED 100% /GREEN 100% /BLUE 100% /WHITE 100%
	201 ⇄ 205	WHITE 1(3200K)
	206 ⇄ 210	WHITE 2 (3400K)
	211 ⇄ 215	WHITE 3(4200K)
	216 ⇄ 220	WHITE 4(4900K)
	221 ⇄ 225	WHITE 5(5600K)
	226 ⇄ 230	WHITE 6(5900K)
	231 ⇄ 235	WHITE 7(6500K)
	236 ⇄ 240	WHITE 8(7200K)
7	0 ⇄ 9	<b>STROBE</b> NO FUNCTION
	10 ⇄ 255	1~20Hz
8	0 ⇄ 50	<b>DIMMER SPEED</b> LINEAR DIMMER
	51 ⇄ 100	NON LINEAR DIMMER 1 ( fastest )
	101 ⇄ 150	NON LINEAR DIMMER 2
	151 ⇄ 200	NON LINEAR DIMMER 3
	201 ⇄ 255	NON LINEAR DIMMER 4 ( slowest )

CHANNEL	VALUE	FUNCTION
1	0 ⇄ 255	HUE(0~100%)
2	0 ⇄ 255	SATURATION(0~100%)
3	0 ⇄ 255	VALUE(0~100%)
4		DIMMER SPEED
	0 ⇄ 50	LINEAR DIMMER
	51 ⇄ 100	NON LINEAR DIMMER 1 ( fastest )
	101 ⇄ 150	NON LINEAR DIMMER 2
	151 ⇄ 200	NON LINEAR DIMMER 3
	201 ⇄ 255	NON LINEAR DIMMER 4 ( slowest )

## 4.3 BASIC INSTRUCTIONS FOR DMX512 OPERATION (STAGE1)

### MASTER DIMMER

CH1 controls the intensity of the currently projected color  
When the slider is at the highest position (255) the intensity of the output is the maximum

### RED, GREEN & BLUE & WHITE COLOR SELECTION

CH2, CH3 & CH4 & CH5 control the intensity ratio of each of the RED, GREEN, BLUE & WHITE LEDs.

When the slider is at the highest position (255) the intensity of the color is the maximum.  
CH2, CH3, CH4 & CH5 can be combined together to create over 16 million colors.

### COLOR MACROS

CH6 selects the required COLOR MACRO  
CH6 has priority over CH2, CH3, CH4 & CH5  
CH1 is used to control the intensity of the COLOR MACRO

### STROBE

CH 7 controls the strobe of CH1 to CH6  
Strobe 1 is with RGB in-step  
Strobe 2 is with RGB out-step  
Strobe 3 is a pulse strobe(fast on/slow off)  
Strobe 4 is a pulse strobe (slow on/fast off)  
CH7 has priority over CH2, CH3, CH4 & CH5.

### ID ADDRESS SELECTION

CH9 is used to select the target ID address.  
Each independent DMX address may have upto 66 independent ID addresses.  
An ID address of 0 will activate all ID address locations.

### AUTO

CH8 selects the preset AUTO programs AT.01-AT.10 or the custom AUTO programs CUS.01-CUS.10  
When activating the custom AUTO programs CUS.01 to CUS.10 then it is possible to control the STEP TIME and FADE TIME using CH2 and CH3 respectively.  
CH8 has priority over CH2, CH3, CH4, CH5, CH6 & CH7.

### DIMMER SPEED

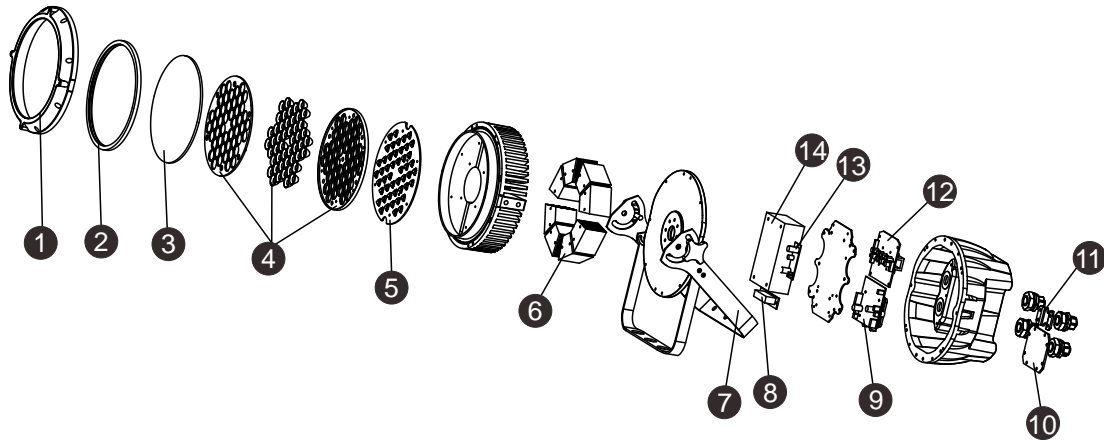
CH10 is for selecting the dimmer mode and dimmer speed. When DIMMER is set to **【Off】**, then RGBW and MASTER DIMMER are linear. The Dim 1/2/3/4 are different speed of the non linear dimmer.

# 5 APPENDIX

## 5.1 TROUBLE SHOOTING

SITUATION	CAUSE	ACTION
<b>No display</b>	1) No power input 2) Power connection error 3) Display damaged 4) Display board IC error , or power input connection error , or two board connection error 5) Contrast decay	1) Check power supply 2) Check power connection 3) Replace display 4) Check the IC and all the connections 5) Adjust the LCD contrast
<b>LED MODULE on, but no control from display</b>	1) Display IC reverse install 2) Display IC damaged	1) Check Display IC installation and quality
<b>Display normal, but no response from buttons</b>	1) Buttons damaged 2) Display IC damaged	1) Replace buttons 2) Replace Display IC
<b>No DMX signal</b>	1) Signal Cable error 2) Signal connection error 3) The DMX signal receive IC damaged 4) DMX address error	1) Check all signal Cables 2) Check all signal connections 3) Check the DMX signal receive IC 4) Check DMX address
<b>When the surface temperature of the unit exceed 75℃, the temperature protection no work .</b>	1) The heat sensor resistance of LED board error 2) The temperature protection circuit on the display error.	1) Replace the heat sensor resistance. 2) Check the temperature protection circuit.
<b>Color mixing uneven,with splash</b>	1) LED not joining well 2) Lens not installing well	1) Check LEDs joining 2) Check lens installing
<b>Partial color ( partial red,partial green, partial blue or partial white )</b>	1) The current of one of the color group LEDs is too strong or too weak. 2) LED brightness not enough	1) Check driver current of the partial color LEDs on the Driver PCB 2) Check LED quality 3) Reset to factory default setting.
<b>LEDs of the same color are not lit</b>	1) LED damaged 2) LED damaged or Main PCB	1) Replace LEDs 2) Replace damaged LED or Main PCB
<b>Manual and program can not save</b>	1) Saving IC damaged	1) Replace saving IC

## 5.2 MAINTENANCE



No	ITEM
1	Front cover
2	Rubber seal
3	Clear glass
4	Lens completed set
5	LED PCB
6	Heat sink
7	Bracket
8	Power connection board
9	Display PCB
10	Display protection metal plate
11	Safety chain board
12	Driver PCB
13	POWER PCB (5V)
14	Power supply (24V)I